

CLAIMS

1. A device for adjusting the carrying position of a rucksack of the type comprising a rucksack back on which a carrying harness is positioned, characterized
5 in that it comprises two positional adjustment and control means (M1-M2) established with the aid of remote manual controls that are autonomous in relation to one another and allow the position of the rucksack back to be adjusted in relation to the carrying
10 harness, the first means (M1) enabling the rucksack back to be raised in relation to the harness, and the second means (M2) enabling the rucksack back to be lowered in relation to the harness, in order to adapt the dimensions of the rucksack back to the back of the
15 wearer and to modify the bearing zones while walking so as to limit and reduce any possible injuries, and in that the rucksack back is designed to accommodate an endless belt (9) arranged in its central longitudinal plane, said belt being secured by a strand to the
20 carrying harness and allowing the relative displacement of the rucksack back in relation to the harness by either or both of the positional adjustment and control means (M1-M2), and in that a locking mechanism (15) urged by the second control means (M2) acts and allows
25 the endless belt (9) to be positionally immobilized or released according to the desired displacement phases.

2. The device as claimed in claim 1, characterized in that the first adjustment means (M1) comprises a
30 nonelastic traction cable (5), a first end (5a) of which is situated in the bottom part of the rucksack back, on one side of the latter, the other end (5b) having a grab ring or loop (5c), and in that said fixed end (5b) is in fact likewise positioned in the bottom
35 part of the rucksack back but at the opposite side from the first end, and in that a deflection means (6) is positioned fixedly in the central bottom part of the carrying harness, allowing the cable to pass through and travel around.

3. The device as claimed in claim 2, characterized in that, in order to prevent the cable from hanging loose, provision is made to retain it using one or more elastic tension strands (8) arranged between parts of the cable in order to form a coiled configuration.

4. The device as claimed in claim 1, characterized in that the endless belt (9) is kept in tension, but is free to run around and is positioned in relation to a first deflection means (10) situated fixedly in the top part of the rucksack back, and in relation to a second deflection means (11) situated fixedly in the bottom part of the rucksack back.

5. The device as claimed in claim 4, characterized in that the lower second deflection means (11) is situated either directly in the bottom part of the rucksack back or in an intermediate position while having a configuration allowing the fastening of two connecting and retaining ties (12) arranged in a V shape and fastened at (12a) in the bottom part of the rucksack back.

6. The device as claimed in claim 1, characterized in that said second means (M2) comprises a second control means (7) consisting of a traction cable (7a), this cable being noteworthy in that, at its lower end (7b), it is associated with a second pull ring (14) and, at its upper end (7c), it is associated with a mechanism (15) for positionally locking and immobilizing the belt (9).

7. The device as claimed in claim 6, characterized in that said second control cable (7) is associated with a locking mechanism (15) which can act on the aforementioned belt in order to allow or prevent the displacement of the latter under certain conditions.

8. The device as claimed in claim 7, characterized in that the upper first deflection means (10) for the belt is designed in the form of a clevis block which has a spindle (10b) over which the belt strand (9) passes and
5 which accommodates an additional horizontal spindle (16) for receiving an articulated immobilizing means (15) constituting the locking mechanism, comprising a lever-forming tongue (15a) which has, in its central part, an annular element (15b) arranged around the
10 aforementioned spindle, and in that said tongue extends on either side of the annular element, having a serrated profile (15c) which can come into contact with and press against the facing part of the belt, and an extension (15d) at the rear for attaching the end of
15 the second control cable, and in that a return means (15e) of the hairpin spring type is mounted on the aforementioned annular element and tends to tilt the tongue part so that there is always continuous contact with the belt.

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9. The device as claimed in claim 8, characterized in that the rucksack back comprises a U-shaped tubular skeleton (4) whose longitudinal branches constitute
25 slide rails for guiding the carrying harness in displacement, and the horizontal upper connecting part being able to accommodate the upper deflection means, itself accommodating the locking means, and in that the cable (7a) is fitted in one of the branches of the tubular framework so as to be guided until it connects
30 with the locking mechanism (15), exiting via the opening formed in said upper part.

10. The device as claimed in claim 4, characterized in that the upper deflection means is in the form of a
35 clevis lock with, between the flanges (10d), a lower spindle (10b) for fastening the connecting belt (9), and an upper spindle (10e) for deflecting a strap (19) constituting the control means (M2), and in that between the spindles (10b-10e) there is arranged a

spindle (16) around which is pivotably mounted the locking mechanism (15) established in the form of a lever which tilts against the action of an elastic return means, said lever being oriented so that it has
5 a serrated profile (15c) in contact with and pressing against the facing wall of the connecting belt (9), and an extension strip (15f) for offsetting the strap (19) when the mechanism is not urged.

10 11. The device as claimed in claim 10, characterized in that the strap (19) has one end (19a) secured to the harness and to the connecting belt, and another end (19b) associated with the traction ring (14), said strap passing around the locking mechanism (15) and
15 being arranged between the rucksack back and the rear strand of the connecting belt when returning toward the ring (14).

12. The device as claimed in claim 10, characterized
20 in that the lower end of the connecting belt (9) is mounted around a spindle (17a) of an attachment (15) in the form of a buckle, said attachment including a second spindle (17b) around which can be wrapped a band (18) whose lower end (18a) is fastened onto the
25 rucksack back.

13. The device as claimed in claim 10, characterized in that the return means (15e) of the hairpin spring type is mounted onto the spindle (16) for articulating
30 the lever (15), and in that the spindle of the branch (15e1) bears against a bearing wall (10f) formed by the deflection means (10), and the other branch (15e2) bears against the rear face of the extension (15f).

14. The device as claimed in claim 10, characterized in that the spindle (10e) for deflecting the strap (19) has a convex or conical configuration allowing the strap (19) to be oriented obliquely in relation to the
5 endless belt (9), the width of said strap being adapted to the profile of the spindle (10e).

15. The device as claimed in claim 10, characterized in that the strap (19) has its end strand (19b) free,
10 with a narrowed end (19b1) being coupled to the control handle of the means (M2), the handle being made in the form of a grab strip (25) of elastomeric material.

16. The device as claimed in claim 10, characterized in that the strap (19) is provided over part of its
15 length, at the point where it passes over and around the deflection means (10), with a graduated scale (22) which defines relative positions of the rucksack back and of the harness in relation to a reference index
20 (23) established on the deflection means (10).

17. The device as claimed in claim 16, characterized in that the deflection means (10) is able to
accommodate a cap (24) for protecting the locking
25 mechanism (15), and in that the front face of the cap has a window (24b) facing the strap (19) and its graduated scale, the reference index being carried on the cap.